lower in its absolute value. --

Replace the paragraph beginning at page 12, line 1 with the following rewritten paragraph:

-- The receiving modem will evaluate the received symbols and search for amplitude changes. If these changes occur only for one symbol per frame and the following symbols either return to the previous value or remain at the new value, the connection is detected as capable of carrying, a V.90 transmission scheme. If, however, the symbols after an amplitude change do not remain at the new value or do not return to the value before the change (in other words there is an impulse response over time), it is determined that a connection according to ITU-T V.90 is not possible. Typical impairments having an impulse response are voice compression algorithms and ADPCM, which may also be regarded as a compression algorithm. Whereas ADPCM has a characteristic impulse response to a change in amplitude, it depends on the design of a voice compression algorithm how large amplitude swings are processed and coded into the output signal of the voice compression coder. --

Replace the paragraph beginning at page 13, line 11 with the following rewritten paragraph:

-- The appended program codes show how line probing signals according to the invention may be produced. The programs are based on a pseudo code. The program of appendix A corresponds to the embodiment of Fig. 2, and the program of appendix B corresponds to the embodiment of Fig. 3. By no means are these programs a limitation of the invention. --

**In the claims:**

Amend claims 1-13 as follows:

-- **1.** In a telephone network connecting a first subscriber end point to a second subscriber endpoint by a signal transmission channel having a digital channel portion, a method of determining properties of said signal transmission channel:

sending a digital probing signal from a first subscriber terminal connected to said first subscriber end point to a second subscriber terminal, connected to said second

subscriber end point, said digital probing signal having a sequence of probing frames, each probing frame having at least one frame portion, each frame portion having a preset number of digital symbols, each digital symbol having a sign bit and a data bit, wherein absolute digital values of the symbols in the frame portions are equal, and wherein a value of the sign bit changes with every adjacent frame portion,

receiving, at said second subscriber terminal, a received signal resulting from having transmitted said digital probing signal through said signal transmission channel;

comparing said received signal with said digital probing signal to distinguish between possible channel configurations of said signal transmission channel; and

transmitting a response signal from said second subscriber terminal to said first subscriber terminal, said response signal carrying information indicative of a result of comparing said received signal with said digital probing signal.

2. The method according to claim **1**, wherein sending a digital probing signal comprises setting all data bits of each symbol of a probing frame to have the same logical value.

3. The method according to claim **1**, wherein sending a digital probing signal comprises setting the total number of symbols of a probing frame to be greater than the number of symbols in an impulse response of a digital impairment of the signal transmission channel.

4. The method according to claim **3**, wherein setting the total number of symbols of a probing frame further comprises selecting the total number of symbols per probing frame to be 80.

5. A subscriber terminal connected to a subscriber end point of a telephone network having a plurality of subscribers, said subscriber terminal comprising:

a connection between said subscriber terminal and a subscriber end point, said subscriber end point being connected to the telephone network by a digital channel portion,

a probing signal transmitter for sending, to a second subscriber terminal to which a signal transmission channel has been established, a digital probing signal having a sequence of probing frames, each probing frame having at least one frame portion, each frame portion having a preset number of digital symbols, each digital symbol having a sign bit and data bits, wherein the absolute digital values of the symbols in the frame portions are equal and wherein the value of the sign bit changes with every adjacent frame portion.

**6.** The subscriber terminal of claim **5**, wherein one bit position of said at least one pulse symbol changes value with every other frame.

**7.** The subscriber terminal of claim **6**, wherein said one bit position is the position of the sign bit.

**8.** The subscriber terminal of claim **5**, wherein the number of equal symbols per frame is significantly higher than the number of pulse symbols.

**9.** The subscriber terminal of claim **5**, wherein there is one pulse symbol per frame.

**10.** The subscriber terminal of claim **5**, wherein there are two pulse symbols per frame.

**11.** The subscriber terminal of claim **5**, wherein the total number of symbols per frame is 80.

**12.** A telephone network comprising:

a connection between a subscriber end point of said telephone network and a first subscriber terminal, said subscriber end point being connected to the telephone network by a digital channel portion,

a probing signal transmitter for sending, to a second subscriber terminal to which a signal transmission channel has been established, a digital probing signal having a sequence of frames, each frame having a sequence of digital symbols, each symbol having a plurality of bits, wherein digital values of all symbols over all frames are equal except for one bit position of each symbol, the value of which changes with every other frame.

**13.** A telephone network comprising:

a connection between a subscriber end point of said telephone network and a first subscriber terminal, said subscriber end point being connected to the telephone network by a digital channel portion,

a probing signal transmitter for sending, to said second subscriber terminal, a digital probing signal having a sequence of frames, each frame having a sequence of digital symbols, each symbol having a plurality of bits, wherein digital values of all symbols are equal except for at least one symbol of each frame having a significantly different digital value compared to the remaining equal values.--